

ABSTRACT OF THE DISCLOSURE

The present invention provides an apparatus and method for threading a biopolymer through a nanopore. The apparatus of the present invention provides a substrate having a channel with a channel wall and a nanopore in the channel wall. The channel and nanopore are designed for receiving a biopolymer. The apparatus includes at least one set of electrodes for moving the biopolymer in a first direction past the nanopore, and at least one set of electrodes for moving the biopolymer through the nanopore in a second direction.

The invention also provides a method for threading a biopolymer through a nanopore. The method includes moving the biopolymer past the nanopore in a first direction, and threading the biopolymer through the nanopore in a second direction.